DREDGE 8

Adam Seamount

3250 - 31 tom

	1																		
-																			
															S. 11				
	XRD									mucleus och	nudeus K								
	Рајео																	- ¹	
_	Archive																		
	35mm Pho																		
	F. Sects.	7.5	d.p. 8.	A tota.															also.
	Si Chem F. Sects.	Bazolt																	
	REE *		Bulk	1 N 2 10 1		Bulk													RD minera
	Pt & Aux		Layers	J. Sharer		Busk													es have XI
	Mn CHEM Pt & Au	Bulk	Larverstant Millers	Lauers/Bao		Bulle													ry sample
	SAMPLE ID	D8-1		5.80	78-4	D8-5-1040	0.80	1.85	08-8	0.8:4	D8-70	1.80							* All chemistry samples have XRD mineralogy done

Bosolt moybe delalle SAMPLE DESCRIPTION

Cruise Id:	F7-87-SC	_ Size: <u>25 x 2 3</u>	x11	Location:	dam	
	D8-1					M
Mn Crust Surface Tex	Description ture: Imports,	granula, o				
Min:	Max Ave	Texture			B	
3					16-1	
4.				200	-	
5						-
6						
Thucker Marin	nd XRD Mineralogy:	- The	ANAL	YSES	Analysis	Weight
thicker pa	d Brown Crust The arts have an inner coom layer		D8.	IA Leh	CC	0-18 mm - Complets u 1 lower masser Longer
Substrate I Rock Type:	Description Bosald		D8-		0 C TS	bosolt
Description:		u of		10 CC .	-7155 4 - nkey for	DR chem.
Born	of between	Cred in				
- 2a	Jos bulle che	Zasi	inely vesicu ayers of muc rust + basal	d between		
Described By	: d' en		ampled for good for bulk			

Cruise Id:	F7-87-S	С	_ Size:	Location	. Adam		
Sample Id:	08-5	.	Weight:	Depth: _	3250 - 3/	70 m	
Mn Crust	Description	1 202		Dopon.			
Surface Text	ture: Sma	J'n		-	PART THE		
				-	cs III		
Mn Crust Tl Min: 5	hickness: Max:	68	Ave: 65			Newson .	
Layers (Oute							1
Min	Max	Ave	Texture				
18_	13	1/2	Laminated -	braan			
2 2 2	26	25	massive all				race.
3′			phosph Bla	it's			
1. 25	32	28			- 8		2 10 400
5							- 1
6							
Comments	nd XRD Mine				D8-2		
Some	phosphin	raiogy:	63	ANALY		F7-8	37-SC
Cloation	s in 1	vodu le	3	Subsample & Typ	oe Analysis	Weight	
Marial	0? 4.7 0	7d A.	to	LA-CA REE	DE ALCC	ron 112	
	Nuc	1003.0	robably	- 3	Pl, Aa. CC +	ST LAND (1)	12 mm
Bettem La			un hoternan Min	. 6	Pe, Au, CC	n d <u>alizi Tarzetta</u> se kilon zi ina	25 mm
Very mes	M. Jazian Ave	Terrino	- than other	A	dpts		× 0 /////
Substrate I Rock Type:	Description	NONE	bottom layer has	rusty(?) layers betwee	n Mn□	-	
		No or you want	— <mark>layers Bottom lay</mark> — <mark>layers</mark>	er more resinous than	other		
Description:				-			
					_		
						-	
				-		E. St games more distincts made to a companion to a special	
				B,C,D No	t sabmitted for	N REE	
				BREEN	issing -		
						-	
Described By:	. di	C1	ampled Pro	MI LR			

~	DO O		_ Size:	Location:		
Sample Id:) <mark>D8-3</mark>	3	Weight:	Depth:	3250 - 3/70	M
Mn Crust I Surface Text	Description ure:	im out-h	14			
	7000000			_		WHEN PERSON
Mn Crust Th	nickness:	50	Ave: 35 m	_"		
Layers (Oute			Ave: 😅 😅 💯 🏠			
Min	Max	Ave	Texture	_ 1		
15	۵	<u> </u>	laminated, brov	7.57 E		
2	20	12	thickly laminated	d (ave 3mm-		100
3			12mm) black w/ phosphate slabs			1. (1.6)
4 17	21	0	massive brown	with		11.70
		†	abundant phosi perpendicular fi	ohate along ractures +	Samuel Market	THE PROPERTY OF THE PARTY OF TH
5		+	basalt fragment		offered by the	
3					7 1	
Comments ar	nd XRD Min	eralogy:			8-3	
				ANALYS		F7-87-SC
				Subsample & Type	Analysis	Weight
				Subsample & Type	CC, REE	Luke (50mm)
					CC, REE	1 (50mm)
					CC, REE	12/15 (50mm) 2/15 1225 (5mm) 2/15 (12mm)
				30	CC, REE	1 (50mm) (50mm)
Substrate D				33 33 3B	CC, REE CC CC Pt, Au	1 (50mm) 2 35 122 (5mm) 2 125 (12mm)
Substrate D	Pescription	Non		30	CC, REE CC CC CC Pt, Au	1 1 (50mm) 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Rock Type:_	Description	Von		33 33 3B	CC, REE CC CC CC Pt, Au REE	1 1 (50mm)
Rock Type:_	escription	Von		35 38 3B	CC, REE CC CC Pt, Au REE Pt, Au	10 (50mm)
Rock Type:_	Description	Non		35 38 3C	CC, REE CC CC CC Pt, Au REE Pt, Au REE	10 (50mm)
Rock Type:_	Description	Von		30 38 38 0 3C 30	CC, REE CC CC Pt, Au REE Pt, Au REE Pt, Au	10 (50mm)
Substrate D Rock Type:	Description	Non		36 38 38 30 20 30 30	CC, REE CC CC CC Pt, Au REE Pt, Au REE Pt, Au REE	1 1 (50mm) 2 1 1 1 1 2 1 (5 mm) 2 1 2 1 (12 mm) 1 1 2 1 (19 mm)
Rock Type:_	Description	Non		36 38 38 30 20 30 30	CC, REE CC CC CC Pt, Au REE Pt, Au REE Pt, Au REE	1 (50mm) 2 5 12 (5mm) 2 12 (12mm)
Rock Type:_	Description	Non		36 38 38 20 30 30 30 31	CC, REE CC CC Pt, Au REE Pt, Au REE Ot, Au REE Ot, Au	1016 (50mm)

misc. crust fragments

Cruise Id: F7-87-SC	_Size: < 18 Y 11 × 5	Location: A	dam	
Sample Id: D8-4	Weight: (hotal)	Depth: _ 3	250-3/70	7 44
Mn Crust Description Surface Texture: smooth granular o of one piece (grain Mn Crust Thickness: Min: Max: Max: Max: Max: Max: Max: Max: Max	n side□ ls <2mm diam)	Depth: 3	250-3/70	The state of the s
Comments and XRD Mineralogy: Miscellaneous crust fragments with common phosphate laminations Substrate Description	No a let a	ANALYSE Subsample & Type	Analysis	Weight F7-87-SC
Rock Type: None				
Description:				
Described By: Subs	ampled By:			3

	IIZal	n <mark>rd skin</mark>		-	The state of the s	
Mn Crust T	hickness				77.5	
		: 28	Ave:		-5	cm
Layers (Out Min	er to Inner): Max	Ave	Texture			
ر	10	10	Memoria Ima Whosperia wil			
2 3	1.7	15	black among the	3		V a
			2015-12 2 216			
3						
4		-		_		P
5						
6					D8-5	
	17: 47:00 - C	sediment	prince none	ANALYS Type	e Analysis	F7-87-S Weight
	7	1		<u> </u>	<u></u>	(45) 25 man
)	_			- TS (BUNK RAD	in'i ar
	large irregu filled w/sedi phosphate common	lar fracture	e side		2 - Pt, Au	501 25 mg
Substrate I	large irregu filled w/sedi phosphate common	ilar fracture iment to one fracture fillir	e side			101 25 May
Substrate I	large irregutilled w/sediphosphate common	lar fracture iment to one fracture fillin	e side ngs			101 25 May
Rock Type:	large irregutilled w/sediphosphate common	lar fracture iment to one fracture fillir	e side ngs			101 25 May
Substrate I Rock Type:	large irregutilled w/sediphosphate common	lar fracture iment to one fracture filling	e side. ngs -			101 25 May
Rock Type: Description:	large irregutilled w/sediphosphate common	lar fracture iment to one fracture filling	e side ings i			101 25 May
Rock Type:	large irregutilled w/sediphosphate common	llar fracture iment to one fracture fillir	e side ings i			101 25 May
Rock Type:	large irregutilled w/sediphosphate common	lar fracture iment to one fracture filling	e side langs I			101 25 May
Rock Type: Description:	large irregutilled w/sediphosphate common	llar fracture iment to one fracture fillir	e side langs I			101 25 May

Cruise Id:_	F7-87-S	SC	Size:	Location Location	on:	Adam		
Sample Id:	08-2) 	Weight: OFF	Depth	ı: <u>3</u> 2	250 - 3/70	7 m	
Mn Crust Surface Tex	Description ture:	lizerd	2K.V	_				
Mn Crust T		12.	Ave:11	-	40			
Layers (Out Min 1		Ave	Texture All laminand Plantagement Thomas					
3			lan i, blebs one Cracture					
5			Balack and			-5 cm	-	
6					7	8-6		
Substrate Rock Type:	osphate□ agic mud w/ oo	ei of old M minated ar + fracture f ccasional s	and have illings + blebs of sand sized dule> marked	ANALYSE Subsample & T		Analysis	Weight	F7-87-SC
	nglolar and se general negotive a	in inox						
Described By	У:	Su	bsampled By:					

Cruise Id: <u>F7-87-SC</u>	Size: 310 913	Vicanian	Adam	
Sample Id: D8-7	Weight:	Depth:	3250 - 3/	70
Mn Crust Description				
Surface Texture:	overlying mubility	-		
56-6-61		_		
Mn Crust Thickness:		_		
Min: Max: on	M Ave: 5mm			
Layers (Outer to Inner):				- / WILLS
Min Max Ave	e Texture		24	T A
1	- I cxuure			
1.				
2				
3				
4				The state of the s
5			7 + 1	-5 cm
6.			San San San	The same
0			2.0	
Comments and XRD Mineralog	ch: Notice of the T	VO	-7	F7 07 C0
- chare nadoles with		ANALYSE		F7-87-SC
- Dminated mancar : 12	with	Subsample & Type	Analysis	
- 15 A 71 2 SA L L CANA				THE BULL OF CALLED
- Jephan a langer				
lobate nodules with multiple volume and local production in the control of the co				The second secon
 larns and blebs surround 1 to on sample 	3 nuclei depending			
Substrate Description				
Rock Type: Altered vol	canic breeze	1300		
Description:				
- Occase with the	to the summer of		-	
Man Man				
7 33 mg 300041			-	
Ancillar aroung the	1 m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
- fraguent California	C+17 (TC2-	•	1.0000.00000000000000000000000000000000	
1/20	NE 72-50 54			
	fragments (z0 Emm			
Angular orange yellow limonitic across) are cemented by black				
Described By:				
- solitoed by:	Subsampled By:			

Cruise Id:	F7-87-5	SC	_ Size: \ \ \ \ \ \ _	5 (1.5 m Location: Adam)
Sample Id:	· D8-	· f	Weight:	Depth: 3250 - 3170M
Mn Crust I				Deptil.
Surface Text	ure: <u>to and</u>	11230 d =	86	
		lizard skin		
In Crust Th	ickness:	5		
Min:	Max:	: <u> </u>	Ave: 6	
ayers (Oute	r to Inner):			
Min	Max	Ave	Texture	
2	3	7	brown, laminate	ted w/ phosphate
2	5	I-M	hlack shiny mas	assive and laminated
	+ -	+	black, Shirty mas	assive and laminated
	 			-5 cm
				NG 0
Fogning Marie 1	enroll. The sounds Z layer o	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	whiter	Subsample & Type Analysis Subsample & Type Analysis Subsample & Type Analysis
	190/52 1ºV			black. Phosphate blebs locally are present□
ock Type:_		harri D.		
	์ เก็วเจ <i>ม</i> เก	1320	102	Small nodules commonly stuck to top ☐ (see pic on back)
	Manganifero	us Greywa	<mark>cke</mark>	(COO P.O ON EDDIN)
escription:	Ci.	A		
0.0005	tipe taction	()		
x3			Jon black	
m 2-6-	J. 3.	yu - by		
shinu s	now love s	1	6 2002	
open.		W 73.	200	-
liv	id occorr	<u>الرائيين</u> ۱۰	1	
J:	-/^	·"		grained, anguular detrital grains are cemented to a black, hard□
			interstic	ticial Mn + phosphate matrix. Visible grains include shiny silver
				d volcanic particles.
<i>y</i> :			interstic feldspa	ticial Mn + phosphate matrix. Visible grains include shiny silver bas (?) phsophortized shell fragments and orange yellow

Described By:

Subsampled By:

trender the granter

ñ

laminated very black somewhat□	Cruise Id:_	F7-87-S	C	Size: <u>504 7 4</u>	J. 125m	_ Location:	Adam	
Mn Crust Description Surface Texture: Mn Crust Thickness: Min: Max Max: Ave: Layers (Outer to Inner): Min Max Ave Texture 1. 2. 3. 4. 5. 6. Comments and XRD Mineralogy: ANALYSES Subsample & Type Laminated very black somewhatt: shiny crust surrounds nuclei of Mn coated tuff (see XRD) Substrate Description Rock Type: Description: Very pourous, black aphanlit material (ash coated with manganese wo coastonal phosphate blebs (*Innn)]	Sample Id:	. D8	- <i>y</i>	Weight:	30.2m	Depth:3	250-3/70	M
Mn Crust Thickness: Min: Max: Ave: Ave: Layers (Outer to Inner): Min Max Ave Texture 1.	M 0 .			_			ink	1 2 2 2 2
Min: Max Ave Texture 1.	-						XKL	
Min Max Ave Texture 1			5 ,, ,	Ave: Lrom		1		No. of the second
3	Min	Max	Ave	Texture		P		C.C.C.
5	2							· ·
5	3					. 4		* 10/4
5	4							
Comments and XRD Mineralogy: ANALYSES Subsample & Type Iaminated very black somewhate shiny crust surrounds nuclei of Mn coated tuff (see XRD) Description: Very pourous, black aphanitic material (ash coated with manganese w occasional phosphate blebs (< Imm) Very pourous, black aphanitic material (ash coated with manganese w occasional phosphate blebs (< Imm) The coated with manganese w occasional phosphate blebs (< Imm) The coated with manganese w occasional phosphate blebs (< Imm) The coated with manganese w occasional phosphate blebs (< Imm) The coated with manganese w occasional phosphate blebs (< Imm) The coated with manganese w occasional phosphate blebs (< Imm)	5							
ANALYSES F7-87-SC Subsample & Type Analysis Weight Analysis Substrate Description Rock Type: Very pourous, black aphanitic material (ash coated with manganese w occasional phosphate blebs (<1mm)	6.						20 0	60 Km 128 Km (C) 28
Description: Very pourous, black aphanitic material (ash coated with manganese w occasional phosphate blebs (<1mm)	lami	nated very blady crust surrour	ck somewh	at□	Subsai	nple & Type		Hack nuclei of
Very pourous, black aphanitic material (ash coated with manganese w occasional phosphate blebs (<1mm)□	Substrate Rock Type:	Description	000	8				
	Very coate phos	pourous, blacked with mangar	s aphanitic nese w occ	material (ash				
Described By: Subsampled By:		13			·			

Cruise Id: F7-87-SC Size: Location: Addition: Depth: 32-50-3170 Mn Crust Description Surface Texture: modified botroidal Mn Crust Thickness: Max: Ave: Texture Min: Max Ave Texture In Max A	Cruise Id:	F7-87-5	SC	Size: Y	7 Jan	Location:_	Adam		
Mn Crust Thickness: Max	Sample Id:	· D8	-70	Weight:	Yogm?	Depth:	3250 - 31	70	
modified botroidal Min Crust Thickness: Min: Max: Max: Max: Max: Max: Min Max Ave: Texture massive, black 2. 3. 4. Comments and XRD Mineralogy: Massive black Mn has sparse and fine grained phosphate blebs Substrate Description Rock Type: Mn costed tuff Description: see D8-9 this rock has large 4mm phosphate blebs in	Mn Crust	Description	1			- 1 T			
Mn Crust Thickness: Min: Max: Ave:	Surface Text	20-47%		1400					
Min: Max: Ave:									
Layers (Outer to Inner): Min Max Ave Texture	Mn Crust Ti Min:	hickness:	. Himan A	ve. 3 mm				*	
Min Max Ave Texture massive, black 2.					-			4	
2	Min		Ave	1				W :	
ANALYSE Subsample & Type Analysis Weight Analysis Weig	1	-		<mark>massive, b</mark>	lack of the last o			1	1
ANALYSE Subsample & Type Massive black Mn has sparse and fine grained phosphate blebs Mn coated tuff Description: See D8-9 this rock has large 4mm phosphate blebs in this rock has large 4mm p	2								Contrade to
ANALYSE Subsample & Type Massive black Mn has sparse and fine grained phosphate blebs Mn coated tuff Description: see D8-90 this rock has large 4mm phosphate blebs in	3						812	-5 cm =	
ANALYSE F7-87-SC Massive black Mn has sparse and fine grained phosphate blebs Mn coated tuff Description: see D8-90 this rock has large 4mm phosphate blebs in	1				(Market 1992)				1
ANALYSE ANALYSE Subsample & Type Massive black Mn has sparse and fine grained phosphate blebs Mn coated tuff Description: see D8-9 this rock has large 4mm phosphate blebs in	5								
ANALYSE Weight Massive black Mn has sparse and fine grained phosphate blebs Mn coated tuff Description: see D8-9 this rock has large 4mm phosphate blebs in	3. <u></u>								
ANALYSE Massive black Mn has sparse and fine grained phosphate blebs Mn coated tuff Description: see D8-9 this rock has large 4mm phosphate blebs in	Comments as	nd YPD Min	onology.	<u> </u>			P8-	0	
Massive black Mn has sparse and fine grained phosphate blebs Subsample & Type Analysis Weight YRD 6 rodges Mn coated tuff Description: See D8-90 this rock has large 4mm phosphate blebs in				United 1	ANA	LYSE			F7-87-SC
Massive black Mn has sparse and fine grained phosphate blebs Massive black Mn has sparse and fine grained phosphate blebs MRD & walks		1 5, 1, 1+8	old prof	their bla	Subsa	mple & Type	Analysis	Weight	
Substrate Description Rock Type:	Massive	e black Mn has phosphate blo	<mark>s sparse and f</mark> ebs	fine	<u>D</u>	8-10			
Substrate Description Rock Type: Mo sale type Mn coated tuff Description: see D8-9 this rock has large 4mm phosphate blebs in						The San Control of the San Contr			
Substrate Description Rock Type: Mo 1344 197 Mn coated tuff Description: see D8-9 this rock has large 4mm phosphate blebs in					_				
Substrate Description Rock Type: Mo saled type Mn coated tuff Description: see D8-9 this rock has large 4mm phosphate blebs in									
Mn coated tuff Description: See D8-9□ this rock has large 4mm phosphate blebs in	Substrate I			1 00					
See D8-9 this rock has large 4mm phosphate blebs in	tock Type:_			<u>ナンド</u>					
see D8-9□ this rock has large 4mm phosphate blebs in	Description:	<u>livin</u>	coated tum		_	82			
see D8-9□ this rock has large 4mm phosphate blebs in					_				
see D8-9□ this rock has large 4mm phosphate blebs in	el _t			<u> </u>					
this rock has large 4mm phosphate blebs in	see D8-9								The state of the s
	this rock		ım phosphate	blebs in	_				
					_				
								-	
	escribed By:	143	Subsan	mpled By:	1				

Cruise Id:	F7-87-SC	Size:	50 x300m	Location:	Adien	
Sample Id:	· D8-11	Weight:	50 cm	Depth: 3	250-3170	
		ari skin			N of	
Mn Crust Tl Min: 2	nickness:	1/ mm Ave: 16 on	top	3		-5 cm
Min	Max A	ve Texture	o Hom			
2						
3			<u></u>			
i						
	and XRD Mineral	ogy:	ANAL	YSE		
	comment.	-2 10 (0)2	Cubban	ple & Type	Analysis	Weight
ubstrate D	Description	+ ald Mr. 2005				
escription:	Mo out h	i nast Ca	-		-	
collas	irm bonds	(get pic other a	×			
nich so	smart has				10 mm (10 mm n)	
	- 12 St. 260	1 - 20	_			
	· · · · · · · · · · · · · · · · · · ·		_•			
Described By:	48	Subsampled By	-			

